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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHAN, RAYMOND NGAN

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/892,649

Applicant(s)

NEMAZIE ET AL.

Examiner

Raymond Phan

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-8, 17-23 and 31-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07112005</u> | 6) <input type="checkbox"/> Other: _____  |

**Part III DETAILED ACTION**

***Notice to Applicant(s)***

1. This action is responsive to the following communications: response filed on July 5, 2005.
2. This application has been examined. Claims 2-8, 17-23, 31-37 are pending.

***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 2, 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 in Patent No. 6,314,480. Although the conflicting claims are not identical, they are not patentably distinct from each other because the minor variation of wordings, an optical disk drive, disk surface, read/write heads, voice coil motor, a head preamplifier, in claim 1 are

obvious expedients since elements (i.e. data storage device, media surfaces, read devices, actuator, a read device preamplifier) of claims 1, 39 of the present application still perform the same functions,

- a host interface for interfacing with a host computer;
- at least one internal communication and control bus, for transfer stored data and control data to and from elements within the integrated hard disk drive controller and interconnected with the host interface to transfer stored data and control data to and from the integrated data hard disk drive controller;
- at least one of a read channel controller and a read/write channel controller coupled to the head preamplifier and the at least one internal communication and control bus, for receiving and processing read channel data from the head preamplifier;
- a motion control servo logic, coupled to the at least one internal communication and control bus, and to the servo control, for generating control signals for driving the servo control;
- a disk controller, coupled to the at least one internal communication and control bus, for transferring stored data to the host interface; and
- a micro-controller, coupled coupled to the at least one internal communication and control bus, for generating control data to control devices within the integrated hard disk controller integrated circuit,

as claim 1 of the patent. In re Karlson, 136 USPQ 189 (ccPA 1963).

5. Claims 17, 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 in Patent No. 6,314,480. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the minor variation of wordings, an optical disk drive, disk surface, read/write heads, voice coil motor, a head preamplifier, in claim 9 are obvious expedients since elements (i.e. data storage device, media surfaces, read devices, actuator, a read device preamplifier) of claim 16 of the present application still perform the same functions,

a servo control coupled to the voice coil motor, for driving the voice coil motor in response to the control signals; and

an integrated hard disk drive controller integrated circuit comprising:

at least one internal communication and control bus, for transfer stored data and control data to and from elements within the integrated hard disk drive controller and interconnected with the host interface to transfer stored data and control data to and from the integrated data hard disk drive controller;

at least one of a read channel controller and a read/write channel controller coupled to the head preamplifier and the at least one internal communication and control bus, for receiving and processing read channel data from the head preamplifier;

a motion control servo logic, coupled to the at least one internal communication and control bus, and to the servo control, for generating control signals for driving the servo control;

a disk controller, coupled to the at least one internal communication and control bus, for transferring stored data to the host interface; and

a micro-controller, coupled to the at least one internal communication and control bus, for generating control data to control devices within the integrated hard disk controller integrated circuit,

as claim 9 of the patent. In re Karlson, 136 USPQ 189 (ccPA 1963).

6. Claims 31 and 37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 in Patent No. 6,314,480. Although the conflicting claims are not identical, they are not patentably distinct from each other because the minor variation of wordings, an optical disk drive, disk surface, read/write heads, voice coil motor, a head preamplifier, in claim 1 are obvious expedients since elements (i.e. data storage device, media surfaces, read devices, actuator, a read device preamplifier) of claim 30 of the present application still perform the same functions,

- an integrated hard disk drive controller integrated circuit comprising:
- a host interface for interfacing with a host computer;
- at least one internal communication and control bus, for transfer stored data and control data to and from elements within the integrated hard disk drive controller and interconnected with the host interface to transfer stored data and control data to and from the integrated data hard disk drive controller;
- at least one of a read channel controller and a read/write channel controller coupled to the head preamplifier and the at least one internal communication and control bus, for receiving and processing read channel data from the head preamplifier;
- a motion control servo logic, coupled to the at least one internal communication and control bus, and to the servo control, for generating control signals for driving the servo control;
- a disk controller, coupled to the at least one internal communication and control bus, for transferring stored data to the host interface; and

a micro-controller, coupled to the at least one internal communication and control bus, for generating control data to control devices within the integrated hard disk controller integrated circuit, selectively multiplexing outputs of one or more of the disc controller, the microprocessor, and the read device data processor with one or more I/O pins such that the integrated circuit may selectively output signals from one or more of the of the disc controller, the microprocessor, read device data processor,

as claims 1 and 7 of the patent. In re Karlson, 136 USPQ 189 (ccPA 1963).

***Allowable Subject Matter***

7. Claims 2-8, 17-23, 31-37 are allowable over the prior art of records.
8. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 2, 8, 17, 23, 31, 37, are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach an integrated data storage device controller integrated circuit comprising

at least one internal communication and control bus, for transfer stored data and control data to and from elements within the integrated data storage controller and interconnected with the host interface to transfer stored data and control data to and from the integrated data storage controller;  
a read device processor, coupled to the read device preamplifier and the at least one internal communication and control bus, for receiving and processing read device data from the read device preamplifier;

a motion control servo logic, coupled to the at least one internal communication and control bus, and to the servo control, for generating control signals for driving the servo control;  
a disc controller, coupled to the at least one internal communication and control bus, for transferring stored data to the host interface; and  
a micro-controller, coupled to the at least one internal communication and control bus, for generating control data to control devices within the integrated data storage device controller integrated circuit (claims 1, 16, 39); selectively multiplexing outputs of one or more of the disc controller, the microprocessor, and the read device data processor with one or more I/O pins such that the integrated circuit may selectively output signals from one or more of the disc controller, the microprocessor, read device data processor (claim 30).

The remaining claims, not specifically mentioned, are allowed for the same reason as set for claims 1, 16, 30, 39.

### *Conclusion*

9. Claims 2-8, 17-23, 31-37 are rejected.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (571) 272-3639 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.



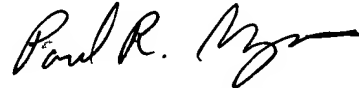
Application/Control Number: 09/892,649  
Art Unit: 2111

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571) 272-2100.

PR



PAUL R. MYERS  
PRIMARY EXAMINER

**Raymond Phan**  
**Sept 5, 2005**